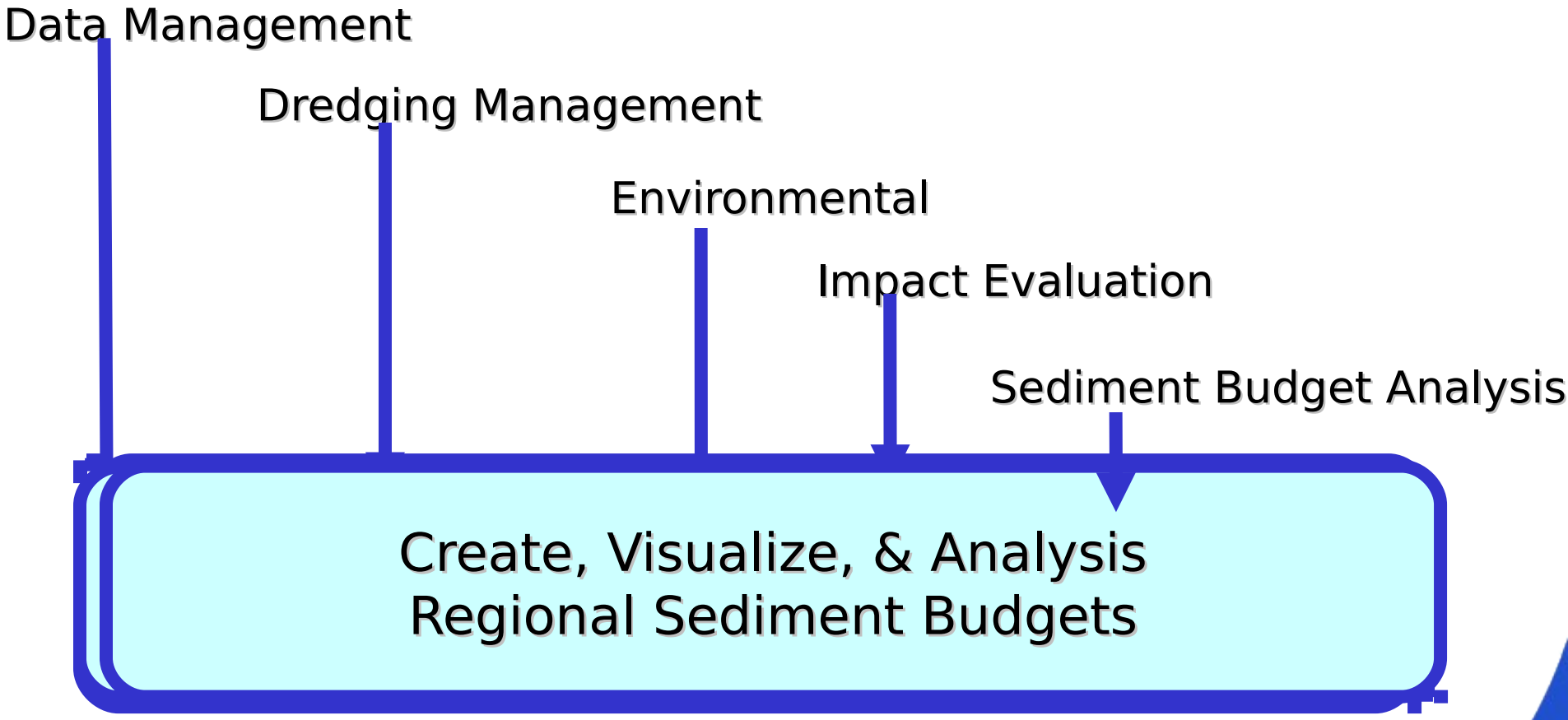
Module 4

Data Management-Applications

Module Overview

1. Lecture: eCoastal Applications
2. Exercise A: Loading the eGIS Toolbars
3. Exercise B: Indexing a New Layer
4. Exercise C: Using the Data Picker Tool
5. Exercise D: Using the Tools of the Data Viewer Toolbar
6. Exercise E: Creating a Raster Index

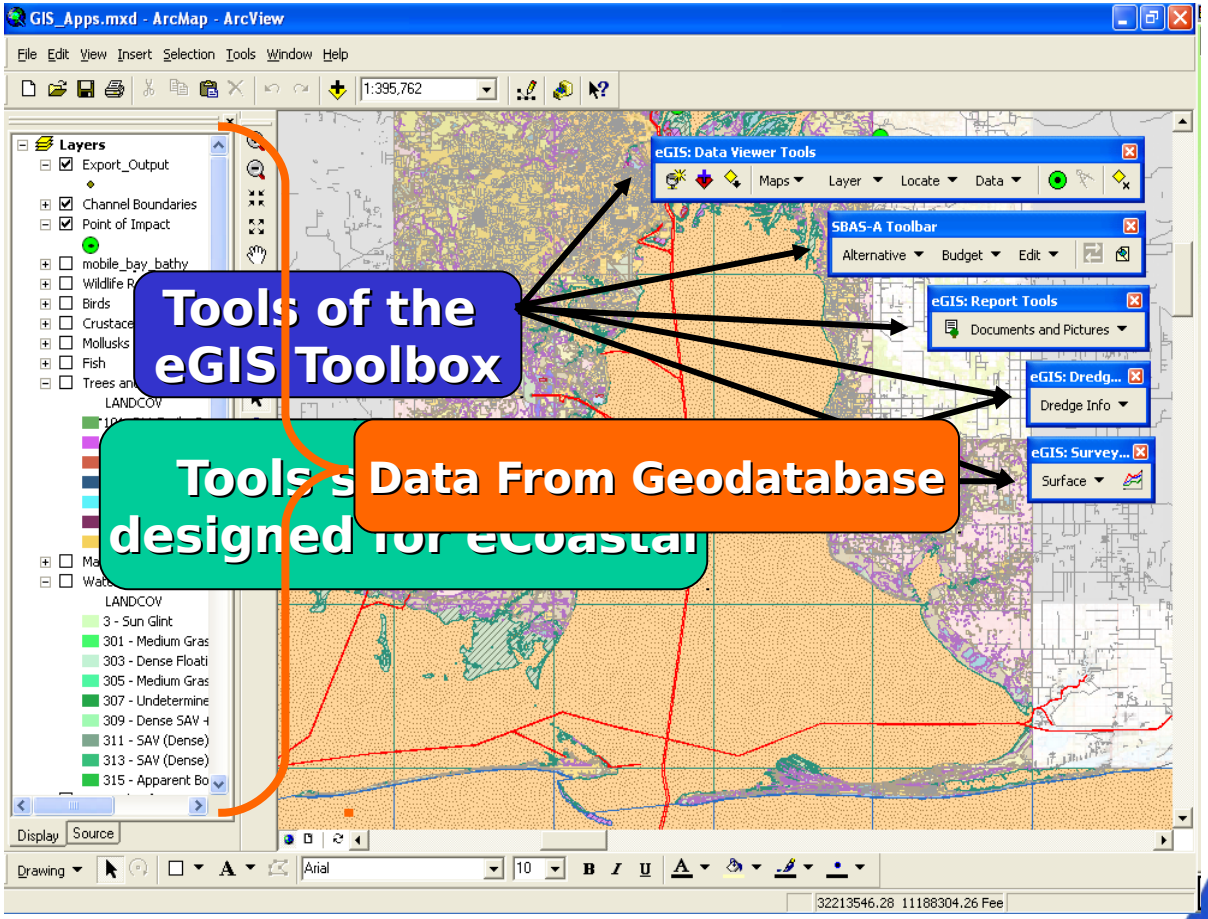
eCoastal System



The Interface: Desktop

Custom applications were built for the Coastal Engineer to standardize the data processing and analysis procedures.

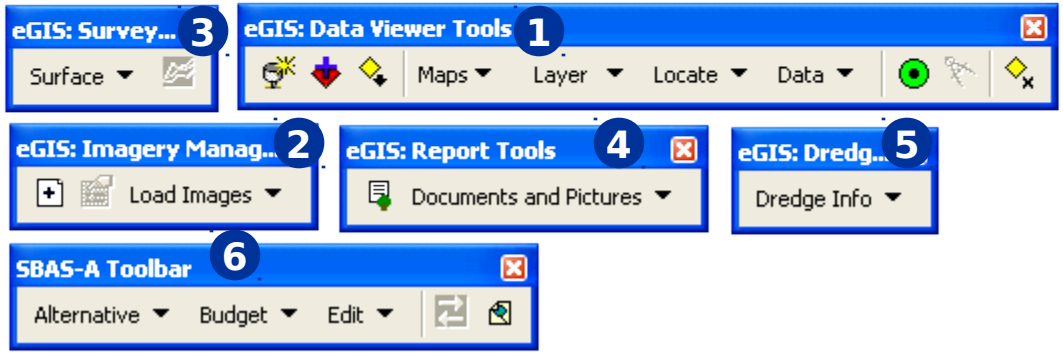
Toolbox is assembled based on user needs.



eCoastal Applications

These tools have emerged as necessary components for effective planning and prediction of regional and local coastal processes.

- Toolbars are modular
- Users can decide which toolbars to load.



eGIS Toolbox

1. Data Viewer Tools
2. Imagery Manager
3. Survey Tools
4. Report Tools
5. Dredge Tools
6. SBAS-A Toolbars

Group Exercise

Exercise A: Loading the eGIS Toolbars

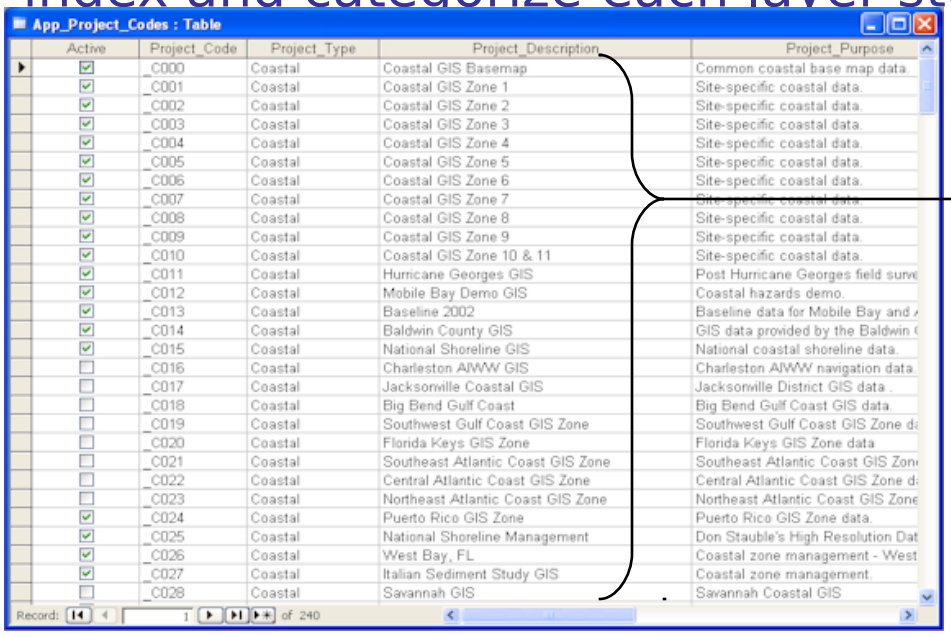
Group Exercise

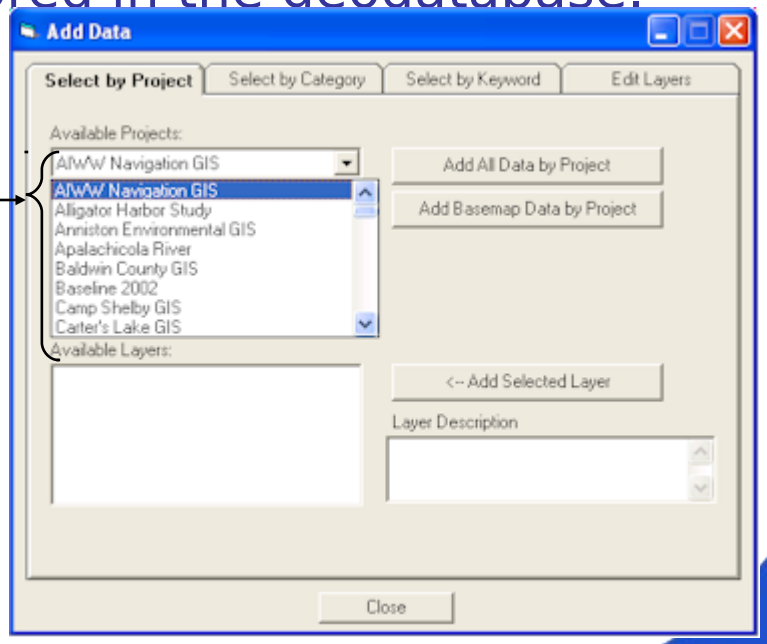
Exercise B: Indexing a New Layer

Exercise B: Indexing a New Layer

The GIS Management Database was created as a repository for indexing non-spatial data, such as reports, photos, spreadsheets, as well as managing all layers stored in the geodatabase.

The contents of the GIS Management Database fuel the desktop and web applications. The main function of this database is to index and categorize each layer stored in the geodatabase.

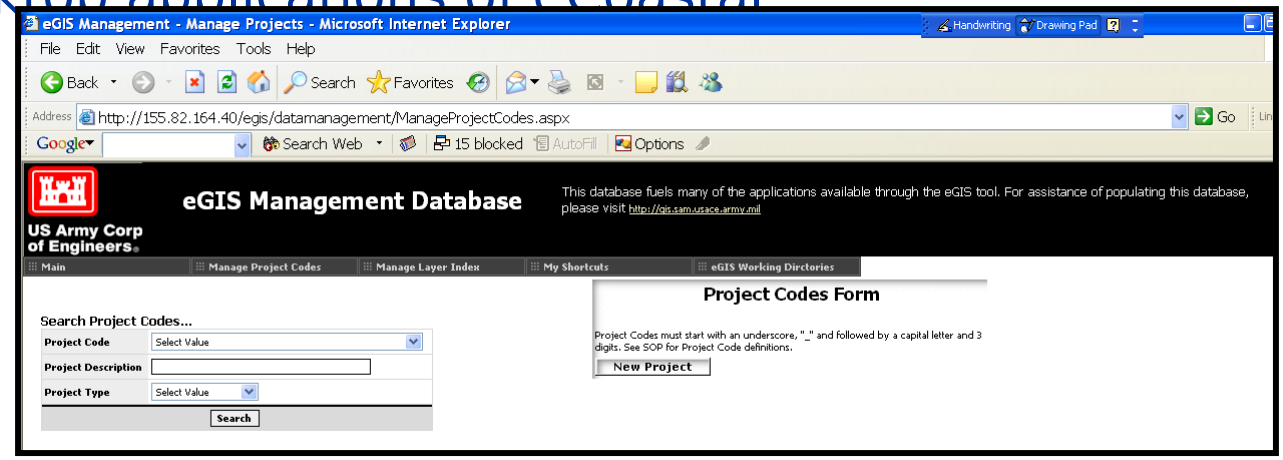

App_Project_Codes : Table
Active
Project_Code
Project_Type
Project_Description
Project_Purpose
_C000 Coastal Coastal GIS Basemap Common coastal base map data.
_C001 Coastal Coastal GIS Zone 1 Site-specific coastal data.
_C002 Coastal Coastal GIS Zone 2 Site-specific coastal data.
_C003 Coastal Coastal GIS Zone 3 Site-specific coastal data.
_C004 Coastal Coastal GIS Zone 4 Site-specific coastal data.
_C005 Coastal Coastal GIS Zone 5 Site-specific coastal data.
_C006 Coastal Coastal GIS Zone 6 Site-specific coastal data.
_C007 Coastal Coastal GIS Zone 7
_C008 Coastal Coastal GIS Zone 8 Site-specific coastal data.
_C009 Coastal Coastal GIS Zone 9 Site-specific coastal data.
_C010 Coastal Coastal GIS Zone 10 & 11 Site-specific coastal data.
_C011 Coastal Hurricane Georges GIS Post Hurricane Georges field surve
_C012 Coastal Mobile Bay Demo GIS Coastal hazards demo.
_C013 Coastal Baseline 2002 Baseline data for Mobile Bay and
_C014 Coastal Baldwin County GIS GIS data provided by the Baldwin
_C015 Coastal National Shoreline GIS National coastal shoreline data.
_C016 Coastal Charleston AIWW GIS Charleston AIWW navigation data.
_C017 Coastal Jacksonville Coastal GIS Jacksonville District GIS data.
_C018 Coastal Big Bend Gulf Coast Big Bend Gulf Coast GIS data.
_C019 Coastal Southwest Gulf Coast GIS Zone Southwest Gulf Coast GIS Zone d
_C020 Coastal Florida Keys GIS Zone Florida Keys GIS Zone data.
_C021 Coastal Southeast Atlantic Coast GIS Zone Southeast Atlantic Coast GIS Zon
_C022 Coastal Central Atlantic Coast GIS Zone Central Atlantic Coast GIS Zone d
_C023 Coastal Northeast Atlantic Coast GIS Zone Northeast Atlantic Coast GIS Zone
_C024 Coastal Puerto Rico GIS Zone Puerto Rico GIS Zone data.
_C025 Coastal National Shoreline Management Don Stauble's High Resolution Dat
_C026 Coastal West Bay, FL Coastal zone management - West
_C027 Coastal Italian Sediment Study GIS Coastal zone management.
_C028 Coastal Savannah GIS Savannah Coastal GIS
Record: 1 of 240



Exercise B: Indexing a New Layer

- The GIS Management Database is used to manage projects contained within the enterprise GIS. The online interface allows users, outside of a GIS environment, to quickly query and view the details of the data and projects.

- This data is accessed by the Power Users of your GIS system. Users with authorized access can add, edit, or delete GIS projects or references to data layers. Contents of this database are used to fuel some of the web and desktop applications of eCoastal.


eGIS Management - Manage Projects - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://155.82.164.40/egis/datamanagement/ManageProjectCodes.aspx
Go
Search Web 15 blocked AutoFill Options
US Army Corp of Engineers
eGIS Management Database
This database fuels many of the applications available through the eGIS tool. For assistance of populating this database, please visit http://gis.sam.usace.army.mil
Main
Manage Project Codes
Manage Layer Index
My Shortcuts
eGIS Working Directories
Search Project Codes...
Project Code
Select Value
Project Description
Project Type
Select Value
Search
Project Codes Form
Project Codes must start with an underscore, "_" and followed by a capital letter and 3 digits. See SOP for Project Code definitions.
New Project

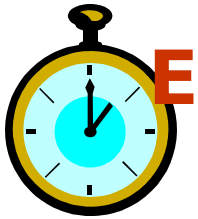
Instructor Demonstration

Exercise B: Indexing a New Layer

Exercise C:
Using the Data Picker Tool

What to Expect:

All data that has been indexed in the GIS Management Database can be easily accessed using the Data Picker tools available on the eGIS: Data Viewer Toolbar. This GUI interface allows all users the ability to quickly search available layers and directly add items to the Table of Contents in ArcMap.



Estimated Length: 25 Minutes

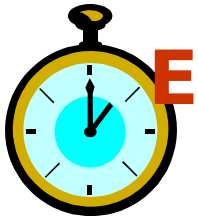
Data Viewer Toolbar

- **Connect** to Database
- **Add Data** from Database
- **Maps:** Create Quick Layout, Create Layout and Report
- **Layer:** Move Layers Up/Down, Sort Layers
- **Locate:** Find by XY, Find by Attribute
- **Data:** Add XY, Import Excel as Point, Bounding Polygon, Polygon Area
- **Tools:** Get Coordinate, Geo to UTM/UTM to Geo Coordinates, Draw Azimuth, Delete Graphics

Exercise D:
Using the Tools of the Data Viewer Toolbar

What to Expect:

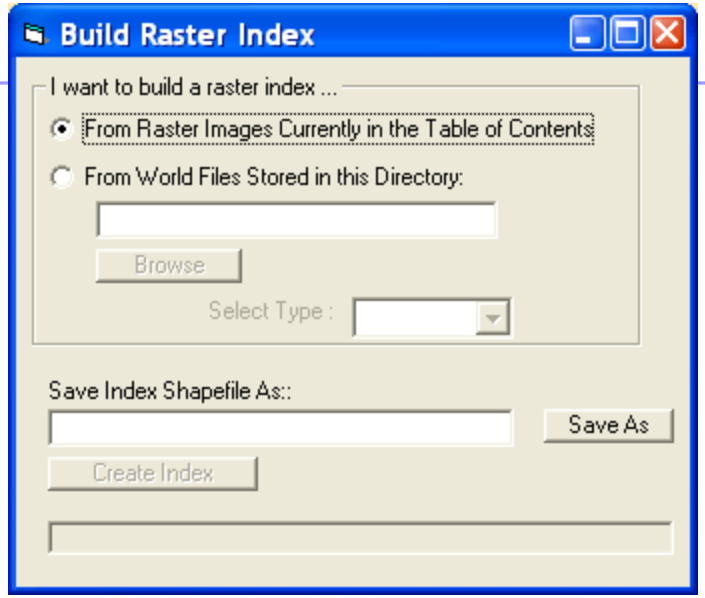
The eGIS Data Viewer Toolbar was created to give the user quick tools for working with spatial data. For this exercise you will launch and use a number of tools on the toolbar.



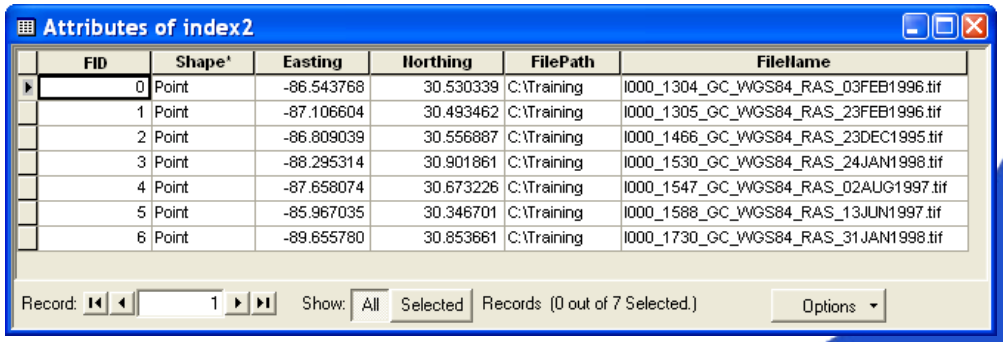
Estimated Length: 15 Minutes

Raster Indexes

- In some cases, managing a number of raster images within ArcGIS can be cumbersome and time consuming.
- The Imagery Manager toolbar was created to assist to the management of multiple raster images.


Build Raster Index
I want to build a raster index ...
From Raster Images Currently in the Table of Contents
From World Files Stored in this Directory:
Browse
Select Type :
Save Index Shapefile As::
Save As
Create Index

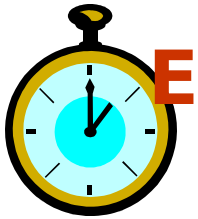
Attributes of index
FID | Shape* | LayerName
0 | Point | I000_1304_GC_WGS84_RAS_03FEB1996.tif
1 | Point | I000_1305_GC_WGS84_RAS_23FEB1996.tif
2 | Point | I000_1466_GC_WGS84_RAS_23DEC1995.tif
3 | Point | I000_1530_GC_WGS84_RAS_24JAN1998.tif
4 | Point | I000_1547_GC_WGS84_RAS_02AUG1997.tif
5 | Point | I000_1588_GC_WGS84_RAS_13JUN1997.tif
6 | Point | I000_1730_GC_WGS84_RAS_31JAN1998.tif
Record: 1
Show: All Selected
Records (0 out of 7 Selected.)


Attributes of index2
FID | Shape* | Easting | Northing | FilePath | FileName
0 | Point | -86.543768 | 30.530339 | C:\Training | I000_1304_GC_WGS84_RAS_03FEB1996.tif
1 | Point | -87.106604 | 30.493462 | C:\Training | I000_1305_GC_WGS84_RAS_23FEB1996.tif
2 | Point | -86.809039 | 30.556887 | C:\Training | I000_1466_GC_WGS84_RAS_23DEC1995.tif
3 | Point | -88.295314 | 30.901861 | C:\Training | I000_1530_GC_WGS84_RAS_24JAN1998.tif
4 | Point | -87.658074 | 30.673226 | C:\Training | I000_1547_GC_WGS84_RAS_02AUG1997.tif
5 | Point | -85.967035 | 30.346701 | C:\Training | I000_1588_GC_WGS84_RAS_13JUN1997.tif
6 | Point | -89.655780 | 30.853661 | C:\Training | I000_1730_GC_WGS84_RAS_31JAN1998.tif
Record: 1
Show: All Selected
Records (0 out of 7 Selected.)
Options

Exercise E: Creating a Raster Index

What to Expect:

With this exercise you will be able to create a raster index from layers loaded in the table of contents or generated directly from world files.



Estimated Length: 15 Minutes

Module Overview

- In this module we discussed the data access procedures used to retrieve and view data stored in the geodatabase. We also explored some of the tools available in the eGIS toolbars.

- The custom tools were developed to enable all users to access and use data stored within the eCoastal system without having to be a GIS expert.